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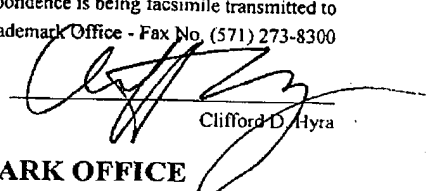
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Clifford D. Hyra

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of

Victor A. Rivas

Serial No. 09/396,888

Art Unit: 2644

Filed: September 16, 1999

Examiner: Laura A. Grier

For: PULSE RATE, PRESSURE AND HEART CONDITION MONITORING GLASSES

**APPEAL BRIEF**

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**REAL PARTY IN INTEREST**

Rivas Technologies International, Inc. is the real party in interest in the above-identified case by virtue of an assignment filed January 23, 2004, and recorded on Recl/Frame 014916/0612.

**RELATED APPEALS AND INTERFERENCES**

No other related appeals or interferences are pending at this time.

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STATUS OF CLAIMS

Claims 30 - 37 were indicated as rejected over prior art, however, the Examiner has not indicated the reasons for the rejection of claim 31.

Claims 2 - 4, 7 - 10, 16, and 31 were indicated as rejected under 35 U.S.C. 112, first paragraph, as containing subject matter not supported by the original disclosure.

Claims 2 - 4, 7 - 10, 16, and 31 were indicated as rejected under 35 U.S.C. 112, second paragraph, for being indefinite.

Claims 11 - 15; 17 - 27 and 29 have been allowed.

Claims 1, 5 and 28 have been cancelled without prejudice.

A copy of the appealed claims is appended hereto in the CLAIMS APPENDIX.

**STATUS OF AMENDMENTS**

No amendments were proposed after the most recent Office Action.

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The present invention is a heart condition monitoring apparatus. The heart condition monitoring apparatus includes a pair of glasses 1 (See, for example, Figure 1 and specification page 2, lines 21 - 22), a plurality of light emitting diodes 21 on the glasses for emitting light onto a surface (See, for example, Figure 1 and specification page 3, lines 2 - 3), a plurality of photosensors 25 on the glasses for receiving reflected light (See, for example, Figure 1 and specification page 3, lines 3 - 6), electronic circuitry 13 on the glasses 1 and connected to the plurality of photosensors 25 for receiving signals from the plurality of photosensors 25 (See, for example, Figure 1 and specification page 3, lines 11 - 14), and a power source 17 on the glasses 1 and connected to the plurality of light emitting diodes 21, the plurality of photosensors 25 and the electronic circuitry 13 for providing power (See, for example, Figure 1 and specification page 3, line 1).

The plurality of photosensors 25 is positioned in a plane offset from the plane of light emission from the light emitting diodes 21 (See, for example, Figure 1 and specification page 3, lines 3 - 5).

A transmitter 19 is located on the glasses 1 and connected to the circuitry 13 for transmitting signals from the circuitry to a remote receiver 41 (See, for example, Figure 1 and specification page 4, lines 17 - 19).

A display on lenses 11 of the glasses 1 or a plurality of lamps on the glasses indicates the sensed condition of a user (See, for example, specification page 3, lines 11 - 18 and 24 - 26). The display is a numerical display for indicating the user's heart rate and pulse rate (See, for example, specification page 3, lines 24 - 26 and page 4, lines 3 - 4).

At least one button is found on the glasses for inputting the user's information (See, for example, specification page 3, lines 20 - 23).

The power source 15, 17 is selected from the group consisting of batteries, solar cells, and combinations thereof (See, for example, specification page 3, line 1).

The present invention is also a method of monitoring heart condition. The method includes providing a pair of glasses (See, for example, Figure 1 and specification page 2, lines 21 - 22), emitting light onto a surface of a user by a plurality of light emitting diodes on the glasses (See, for example, Figure 1 and specification page 3, lines 2 - 3), receiving reflected light by a plurality of photosensors on the glasses (See, for example, specification page 3, lines 7 - 10), determining changes in the amount of reflected light received by the photosensors (See, for example, specification page 3, lines 7 - 19), transmitting a signal corresponding to the change in reflected light from the photosensors to circuitry on the glasses (See, for example, specification page 3, lines 7 - 19), and determining a user's condition by measuring changes in the signals received by the circuitry (See, for example, specification page 3, lines 7 - 19).



**RECEIVED  
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Claims 2 - 4, 7 - 10, 16, and 31 stand rejected under 35 U.S.C. 112, first paragraph as containing subject matter not supported by the original disclosure.

Claims 2 - 4, 7 - 10, 16, and 31 stand rejected under 35 U.S.C. 112, second paragraph as failing to particularly point out and distinctly claim the subject matter the Applicant regards as the invention.

Claims 30 and 37 stand rejected under 35 U.S.C. 102(e) as being anticipated by Fukushima et al. (U.S. Patent No. 6,123,661).

Claim 32 stands rejected under 35 U.S.C. 103(a) as being obvious over Fukushima et al. (U.S. Patent No. 6,123,661) in view of Piosenka et al. (U.S. Patent No. 5,359,444).

Claims 33, 34 and 36 stand rejected under 35 U.S.C. 103(a) as being obvious over Fukushima et al. (U.S. Patent No. 6,123,661) in view of Ryll (U.S. Patent No. 5,813,990).

Claim 35 stands rejected under 35 U.S.C. 103(a) as being obvious over Fukushima et al. (U.S. Patent No. 6,123,661) in view of Mathews (U.S. Patent No. 5,431,170).

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ARGUMENTS

Allowance of all claims is requested. All of the claims distinguish the invention from the references.

Claims 2 – 4, 7 - 10, 16, and 31 are patentable under 35 U.S.C. 112, first paragraph as containing subject matter supported by the original disclosure.

The new 35 U.S.C. 112, first paragraph rejections should be withdrawn. Applicant objects to the introduction of 35 U.S.C. 112 rejections eight office actions and seven years after the application was filed. The Applicant's specification would reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

All of the appealed claims reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Claim 7 is patentable under 35 U.S.C. 112, first paragraph.

Claim 7 teaches that the plurality of photosensors are positioned in a plane offset from the plane of light emission from the light emitting diodes. This reasonably conveys to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

The Examiner has objected to the description of the positioning of the photosensors in a plane offset from the plane of light emission from the light emitting diodes in the specification. In particular the Examiner states that the specification fails to disclose a plurality of photosensors positioned in a plane offset from the plane of the light emitting diodes and that the drawings

show that the sensors and diodes are positioned in the same plane.

However, this is incorrect. The drawings clearly show that the photosensors and diodes are positioned in offset planes. There is only one plane that all of the photosensors, on both sides of the glasses, are in, and that plane is a horizontal plane below the plane in which all of the diodes are positioned. In addition, claim 7 actually states that "the plurality of photosensors are positioned in a plane offset from the plane of light emission from the light emitting diodes." (Emphasis added) However, the plane of light emission is identical to the plane in which the diodes are located.

In Figure one it can be seen that the light emitting diodes (LEDs) are pointed inward toward the user, perpendicular to the structure of the glasses on which they are mounted. Therefore the plane of light emission is a horizontal plane at the vertical level of the LEDs. In the same figure it is apparent that the photosensors are located in a plane offset vertically from the plane of light emission as claimed. This claim element is important and makes clear that the photosensors are not in direct light contact with the LEDs.

The specification describes that the photosensors are in a plane offset from the plane of light emission. Each term used reasonably conveys this subject matter and makes it clear that the inventor was in possession of the invention at the time of filing. In addition, claim 7 uses language identical to the language in claim 16, which is an original claim and part of the original disclosure, and is fully described in Figure 1.

For example, the specification, page 3, lines 2 - 5, states:

"Light emitting diodes (LED's) 21 are arranged in an array 23 along the insides of the temples. Photosensors 25 are arranged in an array 27 along... and near the LED's 21, but not in direct light contact with the LED's 21."

Therefore, it is clear that the original disclosure has defined the positioning of the photosensors in an array on the inside of the glasses along and near but slightly offset from the LEDs. The language is consistent with and supportive of the figure it is describing, Figure 1.

Therefore, claim 7 is patentable under 35 U.S.C. 112, first paragraph because it reasonably conveys to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Claims 2 - 4, 8 - 10, 16, and 31 are patentable under 35 U.S.C. 112, first paragraph.

Claims 2 - 4 and 8 - 10 are rejected solely on their dependence on claim 7, which as explained above is patentable under 35 U.S.C. 112, first paragraph. Therefore, claims 2 - 4, 8 - 10, 16, and 31 are patentable under 35 U.S.C. 112, first paragraph because they reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention.

Therefore, the rejections under 35 U.S.C. 112, first paragraph should be withdrawn.

Claims 2 - 4, 7 - 10, 16, and 31 are patentable under 35 U.S.C. 112, second paragraph because they particularly point out and distinctly claim the subject matter the Applicant regards as the invention.

The 35 U.S.C. 112, second paragraph rejections should be withdrawn. The claims are not indefinite because they particularly point out and distinctly claim the subject matter that the Applicant regards as the invention.

Claims 2 - 4, 7 - 10, 16, and 31 are patentable under 35 U.S.C. 112, second paragraph.

The language used in all claims is precise and definite and there is no ambiguity in the claims. The claims particularly and distinctly claim the subject matter that Applicant regards as the invention. Claims 7, 16, and 31 describe that the plurality of photosensors are positioned in a plane offset from the plane of light emission from the light emitting diodes. Claims 2 - 4 and 8 - 10 are dependent on claim 7.

The Examiner has objected to the use of the language "a plurality of photosensors positioned in a plane offset from the plane of the light emitting diodes," asserting that it is not supported in the specification and is therefore a misdescription or misrepresentation of the position of the photosensors and LEDs. This language actually does not appear in any of the claims. However, as described above, the specification fully supports that language, as well as the actual language used ("offset from the plane of light emission..."). The claims are accurate and definite in every way.

"With regard to the § 112, second paragraph rejection, we note that it is well settled that claims in an application must define the metes and bounds of the claimed invention with a reasonable degree of precision and particularity." Ex parte Ohsumi, 21 USPQ2d 1020, 1024

(BPAI 1991) (citing In re Venezia, 189 USPQ 149 (CCPA 1976); In re Hammack, 166 USPQ 204 (CCPA 1970)).

The decision went on to state the purpose of the second paragraph of 35 U.S.C. 112 as "to provide those who would endeavor, in future enterprise, to approach the area circumscribed by the claims of a patent, with the adequate notice demanded by due process of law, so that they may more readily and accurately determine the boundaries of protection involved and evaluate the possibility of infringement and dominance." Ex parte Ohsumi, 21 USPQ2d 1020, 1024 (BPAI 1991).

The court concluded that it was sufficient to not that "the applicant has a right to define what he regards as his invention as he chooses, so long as his definition is reasonably distinct."

The specification text and drawings and the claim language together make apparent the positioning of the photosensors and LED's. Therefore the application gives adequate notice of the boundaries of protection involved. Altogether, the shape, construction and functionality of the claimed invention are adequately described in the specification to enable one skilled in the art to make and use the invention.

Therefore, claims 2 - 4, 7 - 10, 16, and 31 are definite and patentable under 35 USC 112, second paragraph.

Therefore, the rejection based on 35 U.S.C. 112, second paragraph should be withdrawn.

**Claims 30 and 37 are patentable under 35 U.S.C. 102(e) over Fukushima et al. (U.S. Patent 6,123,661).**

Claim 30 describes a heart condition monitoring apparatus, comprising a pair of glasses; a plurality of light emitting diodes on the glasses for emitting light onto a surface; a plurality of photosensors on the glasses for receiving reflected light; electronic circuitry on the glasses and connected to the plurality of photosensors for receiving signals from the plurality of photosensors; and a power source on the glasses and connected to the plurality of light emitting diodes, the plurality of photosensors and the electronic circuitry for providing power.

Fukushima is a new reference cited by the Examiner in a Final Office Action dated October 7, 2005 and another Office Action after prosecution was reopened dated June 2, 2006. Fukushima was not previously cited by the Examiner.

Fukushima does not teach a heart condition monitoring apparatus. Instead, Fukushima is a combination massage and relaxation chair. The photosensors and light emitting diodes of Fukushima merely function to detect rates of blinking of a user for the purpose of saving power. The photosensors and light emitting diodes of the Applicant's invention are sophisticated and allow the apparatus to monitor heart conditions of the user. Fukushima does not anticipate the Applicant's invention.

Nowhere in Fukushima is there evidence of electronic circuitry on the glasses and connected to the plurality of photosensors for receiving signals from the plurality of photosensors as indicated in claim 30 of the Applicant's invention.

Furthermore, there is no explicit power source "on the glasses" and "connected to the plurality of light emitting diodes, the plurality of photosensors and the electronic circuitry" as required in claim 30. The Examiner cites Fukushima column 6, lines 12 - 15 as teaching the

limitations of claim 30. However, Fukushima does not disclose that the power supply is found on the glasses.

As such, Fukushima does not teach all the limitations of claim 30. Claim 30 is patentable over Fukushima.

Claim 37 teaches a method of monitoring heart condition, comprising providing a pair of glasses; emitting light onto a surface of a user by a plurality of light emitting diodes on the glasses; receiving reflected light by a plurality of photosensors on the glasses; determining changes in the amount of reflected light received by the photosensors; transmitting a signal corresponding to the change in reflected light from the photosensors to circuitry on the glasses; and determining a user's condition by measuring changes in the signals received by the circuitry.

Fukushima does not teach a heart condition monitoring apparatus. Instead, Fukushima is a combination massage and relaxation chair. The photosensors and light emitting diodes of Fukushima merely function to detect rates of blinking of a user for the purpose of saving power. The photosensors and light emitting diodes of the Applicant's invention are sophisticated and allow the apparatus to monitor heart conditions of the user. Fukushima does not anticipate the Applicant's invention.

Nowhere in Fukushima is there mention of transmitting a signal corresponding to the change in reflected light from the photosensors to circuitry on the glasses as required in claim 37. Therefore, claim 37 is patentable over Fukushima.



**The present claims are patentable under 35 U.S.C. 103.**

In considering the patentability of the present invention, it is requested that the Board consider the invention as a whole, consider the scope and content of the prior art as a whole, consider the differences between the claims at issue and the prior art, and consider the level of ordinary skill in the art to which the invention pertains at the time the invention was made.

Graham v. John Deere Co., 148 USPQ 459, 467 (1966).

**THE INVENTION AS A WHOLE**

The invention considered as a whole is best described by the appended claims.

**PRIOR ART AS A WHOLE**

The prior art to which the invention pertains is typified by the references of record.

**DIFFERENCES BETWEEN THE INVENTION AND THE PRIOR ART**

Each of the present claims defines unique features and each is individually patentable over the prior art.

The test in reviewing rejections under 35 U.S.C. 103 in which the examiner has relied on teachings of several references, is whether references, viewed individually and collectively, would have suggested claimed invention to a person possessing ordinary skill in the art, and citing references which merely indicate that isolated elements and/or features recited in the claims are known is not a sufficient basis for concluding that combination of the claimed elements would have been obvious. Ex parte Hiyamizu, 10 USPQ2d 1393-1395 (Board of

Patent Appeals and Inter., 1988); In re Kaslow, 217 USPQ 1089 (Fed. Cir. 1983); In re Deminski, 230 USPQ 313 (Fed. Cir. 1986).

**Claim 32 is patentable under 35 U.S.C. 103(a) as being non-obvious over Fukushima et al. (U.S. Patent No. 6,123,661) in view of Piosenka et al. (U.S. Patent No. 5,359,444).**

Claim 32 adds a transmitter on the glasses and connected to the circuitry for transmitting signals from the circuitry to a remote receiver to the patentable features of claim 30. Fukushima is a combination massage and relaxation chair and does not specifically mention a transmitter for connecting circuitry to a remote receiver. Piosenka is a new reference never cited in the eight previous office actions and has no relation to Fukushima or to the present invention. No one would think to combine the two references. Nothing in either reference suggests their combination. There would be no motivation to combine the two references, as no benefit would be obtained by supplying Fukushima with a transmitter. The massage chair of Fukushima has no need for one.

Furthermore, neither reference constitutes relevant analogous art under the In Re Dillon standard. Neither reference is within the inventor's field of endeavor. Fukushima relates to a massage chair and Piosenka relates to a pair of auto-focusing lenses. In addition, neither reference is reasonably pertinent to the particular problem with which the inventor was involved. The present invention is directed to early detection of adverse heart conditions through the use of an inexpensive, light, convenient, effective and robust device. Neither reference would be looked at to solve the problem the inventor was involved with. Therefore, claim 32 is patentable over Fukushima in view of Piosenka.

**Claims 33 – 34 and 36 are patentable under 35 U.S.C. 103(a) as being non-obvious over Fukushima et al. (U.S. Patent No. 6,123,661) in view of Ryll (U.S. Patent No. 5,813,990).**

The present claims particularly point out new and unobvious features of the invention which are not found in any reference and which would not have been obvious from the references. Nothing in each of the references teaches or suggests the claimed features. Therefore, the references cannot anticipate nor render obvious the present invention as claimed.

Claims 33 and 34 are patentable over Fukushima in view of Ryll. Claim 33 adds to the patentable features of claim 30 a display on lenses of the glasses for indicating the sensed condition of a user. Claim 34 adds to the patentable features of claim 33 that the display is a numerical display for indicating the user's heart rate and pulse rate. These patentable features are not found in the cited references.

As indicated by the Examiner, Fukushima does not indicate a sensed condition to the user. Ryll teaches a pair of sports goggles with information feedback. It would not have been obvious to one of ordinary skill in the art at the time of the invention to combine the sports goggles of Ryll with the massage chair of Fukushima. The two inventions are used for very diverse purposes. Therefore, claims 33 and 34 are patentable over Fukushima in view of Ryll.

Claim 36 adds to the patentable features of claim 30 that the power source is selected from the group consisting of batteries, solar cells, and combinations thereof. As indicated by the Examiner, Fukushima does not disclose batteries or solar cells as a power supply. Ryll does not disclose solar cells as a power source. It would not have been obvious to one of ordinary skill in the art at the time of invention to combine Fukushima with Ryll. Therefore, claim 36 is patentable over Fukushima in view of Ryll.

**Claim 35 is patentable under 35 U.S.C. 103(a) over Fukushima et al. (U.S. Patent 6,123,661) in view of Mathews (U.S. Patent 5,431,170).**

Claim 35 adds to the patentable features of claim 30 at least one button on the glasses for inputting the user's information.

Mathews relates to a headband with a wristband readout device. The headband worn against the forehead of a user has a pulse rate meter with sensors for determining pulse rate and blood oxygen levels. A short-wave radio communication transmits signals from the sensor on the forehead to the display on the wrist. It is not understood how Mathews could have anything to do with the claimed invention or with Fukushima.

It would not have been obvious to one of ordinary skill in the art at the time of the invention to combine Fukushima with Mathews. The two inventions are unrelated. There is no motivation in either reference that would suggest combination.

Therefore, claim 35 is patentable over Fukushima in view of Mathews.

**LEVEL OF ORDINARY SKILL IN THE ART**

A person having ordinary skill in the art is an artisan being taught the reference teachings.

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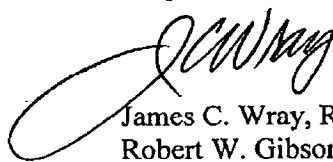
SUMMARY

When considering the present invention as a whole and the prior art to which the invention pertains as a whole, when considering the differences between the present invention and the prior art, and when considering the level of ordinary skill in the art to which the invention pertains, it is clear that the invention would not have been obvious under 35 U.S.C. 103 to a person having ordinary skill in the art at the time the invention was made.

CONCLUSION

Reversal of the Examiner and allowance of all the claims are respectfully requested.

Respectfully,



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Date: November 1, 2006

### CLAIMS APPENDIX

#### **Appealed Claims:**

2. The apparatus of claim 7, wherein the power source is a battery.
3. The apparatus of claim 7, wherein the power source is at least one solar cell.
4. The apparatus of claim 3, further comprising:  
a battery as a back-up power source to the at least one solar cell.
6. The apparatus of claim 7, further comprising a transmitter on the glasses and connected to the circuitry for transmitting signals from the circuitry to a remote receiver.
7. Heart condition monitoring apparatus, comprising:  
a pair of glasses;  
a plurality of light emitting diodes on the glasses for emitting light onto a surface;  
a plurality of photosensors on the glasses for receiving reflected light;  
electronic circuitry on the glasses and connected to the plurality of photosensors for receiving signals from the plurality of photosensors;  
a power source on the glasses and connected to the plurality of light emitting diodes, the plurality of photosensors and the electronic circuitry for providing power; and  
wherein the plurality of photosensors are positioned in a plane offset from the plane of light emission from the light emitting diodes,  
further comprising a plurality of lamps on the pair of glasses for indicating a sensed condition of a user.
8. The apparatus of claim 7, further comprising a display on lenses of the glasses for indicating the sensed condition of a user.

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9. The apparatus of claim 7, wherein the display is a numerical display for indicating the user's heart rate and pulse rate.

10. The apparatus of claim 7, further comprising at least one button on the glasses for inputting the user's information.

11. Heart condition monitoring apparatus, comprising:

- a pair of glasses;
- a plurality of light emitting diodes on the glasses for emitting light onto a surface;
- a plurality of photosensors on the glasses for receiving reflected light;
- a plurality of electrodes positioned on a user's body for determining heart rate;
- a sensor on the user's wrist for determining pulse rate;
- a receiver on the glasses for receiving signals from the plurality of photosensors, from the plurality of electrodes and from the sensor; and
- a power source connected to the glasses for providing power to the plurality of light emitting diodes, the plurality of photosensors and the receiver.

12. The apparatus of claim 11, further comprising:

- a display on the lenses of the glasses for displaying signals transmitted by the receiver indicating a sensed condition of the user.

13. The apparatus of claim 12, wherein the display is a numerical display for indicating the user's pulse rate and heart rate.

14. The apparatus of claim 11, further comprising:

- a plurality of lamps on the glasses for indicating the sensed condition of the user.

15. The apparatus of claim 11, wherein the sensor is connected to a watch.

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16. The apparatus of claim 11, wherein the plurality of photosensors are positioned in a plane offset from the plane of light emission from the light emitting diodes.

17. The apparatus of claim 11, wherein the power source is a battery.

18. The apparatus of claim 11, wherein the power source is at least one solar cell.

19. The apparatus of claim 18, further comprising:

a battery as a back-up power source to the at least one solar cell.

20. The apparatus of claim 15, further comprising a radio transmitter on the watch for transmitting signals from the sensor to the receiver.

21. The apparatus of claim 11, wherein the receiver is a signal discriminator chip.

22. A method of monitoring heart condition, comprising:

providing a pair of glasses;

emitting light onto a surface of a user by a plurality of light emitting diodes on the glasses;

receiving reflected light by a plurality of photosensors on the glasses;

determining changes in the amount of reflected light received by the photosensors;

transmitting a signal corresponding to the change in reflected light from the photosensors to circuitry on the glasses;

determining a user's condition by measuring changes in the signals received by the circuitry,

placing a sensor on the user's wrist;

sensing the user's pulse rate by the sensor; and

transmitting the pulse rate signal from the sensor to the circuitry on the glasses.

23. The method of claim 22, further comprising

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inputting target conditions to the circuitry;

comparing the sensed condition to the target condition; and

indicating to the user the relation between the sensed condition and the target condition.

24. The method of claim 23, wherein the indicating to the user comprises displaying a lighted display on the lenses of the glasses.

25. The method of claim 23, wherein the indicating to the user comprises displaying a numerical display on the lenses of the glasses.

26. The method of claim 22, further comprising:

sending the signal from the circuitry to a transmitter;

sending the signal from the transmitter to a remote receiver;

sending the signal from the remote receiver to a home computer;

determining if the sensed condition exceeds the user's inputted target condition; and

sending the signal from the home computer to a doctor's office through the Internet when the sensed condition exceeds the target condition.

27. The method of claim 22, further comprising:

sending the signal from the circuitry to a transmitter;

sending the signal from the transmitter to a home computer;

determining if the sensed condition exceeds the user's inputted target condition by the home computer; and

dialing an emergency service by the home computer when the sensed condition exceeds the target condition.

29. The method of claim 22, further comprising:

placing a plurality of electrodes on the user;

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sensing the user's heart rate through the plurality of electrodes; and  
transmitting the heart rate signal from the plurality of electrodes to the circuitry on the glasses.

30. Heart condition monitoring apparatus, comprising:  
a pair of glasses;  
a plurality of light emitting diodes on the glasses for emitting light onto a surface;  
a plurality of photosensors on the glasses for receiving reflected light;  
electronic circuitry on the glasses and connected to the plurality of photosensors for receiving signals from the plurality of photosensors; and  
a power source on the glasses and connected to the plurality of light emitting diodes, the plurality of photosensors and the electronic circuitry for providing power.
31. The apparatus of claim 30, wherein the plurality of photosensors are positioned in a plane offset from the plane of light emission from the light emitting diodes.
32. The apparatus of claim 30, further comprising a transmitter on the glasses and connected to the circuitry for transmitting signals from the circuitry to a remote receiver.
33. The apparatus of claim 30, further comprising a display on lenses of the glasses for indicating the sensed condition of a user.
34. The apparatus of claim 33, wherein the display is a numerical display for indicating the user's heart rate and pulse rate.
35. The apparatus of claim 30, further comprising at least one button on the glasses for inputting the user's information.
36. The apparatus of claim 30, wherein the power source is selected from the group consisting of batteries, solar cells, and combinations thereof.

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37. A method of monitoring heart condition, comprising:

- providing a pair of glasses;
- emitting light onto a surface of a user by a plurality of light emitting diodes on the glasses;
- receiving reflected light by a plurality of photosensors on the glasses;
- determining changes in the amount of reflected light received by the photosensors;
- transmitting a signal corresponding to the change in reflected light from the photosensors to circuitry on the glasses; and
- determining a user's condition by measuring changes in the signals received by the circuitry.

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**EVIDENCE APPENDIX**

No additional evidence.

APP B 1

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**RELATED PROCEEDINGS APPENDIX**

There are no related proceedings.

APP C 1

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